Sungjun Eom (updated on Aug. 16, 2025.)

sungjun.eom2024@gmail.com
Google Scholar: https://scholar.google.com/citations?user=vymNsc8AAAAJ&hl=en
Website: https://sungjuneom.github.io/

Research Interest

My research interest is focused on **bridging the gap between the digital and physical worlds** by enhancing the **robustness**, **adaptability**, and **practicality** of **intelligent systems**.

Education

•M.S. in Electrical & Computer Engineering *Mar. 2025 - Present*
University of Seoul Seoul, South Korea

•B.S. in Electrical & Computer Engineering *Mar. 2018 - Feb. 2025*
University of Seoul Seoul, South Korea

•B.S. in Statistics *Mar. 2018 - Feb. 2025*
University of Seoul Seoul, South Korea

Experience

•Control and Dynamic Systems Lab, University of Seoul *Jan. 2024 - Present*
Master Student, Undergraduate Research Intern Seoul, South Korea
– Currently improving the differential dynamic programming algorithm.

•Intelligent Robot Lab, University of Seoul *Jan. 2023 - Feb 2023*
Undergraduate Research Intern Seoul, South Korea
– Presented a paper review on the state-of-the-art MFA-Conformer in the speaker verification field at that time.

•Deep Learning Specilization Course by Andrew Ng, Coursera *Dec. 2021 - Feb. 2022*
5 courses Online
– Built neural network architectures such as CNNs, RNNs, LSTMs, Transformers.
– Learned Dropout, BatchNorm and Xavier/He initialization.
– Tackled real-world cases such as speech recognition, music synthesis, chatbots, machine translation, natural language processing and more.

•Republic of Korea Defense Communication Command, Republic of Korea Air Force *Sep. 2019 - Jun. 2021*
Signalman, Squad Leader, Staff Sergeant Osan Air Base, South Korea
– Operated and maintained a robust Wide Area Communication System to facilitate efficient and secure communication across large geographic areas.
– Led a squad of 12 members, ensuring effective communication, coordination, and mission accomplishment.
– Discharged with the rank of staff sergeant.

Projects

•Practical Problem Research Group 2025. Research on heterogeneous control including reinforcement learning and model predictive control on 4 legged robots. Funded by Uniersity of Seoul. (*Aug. 2025 - Present*)

•Development of real-time vehicle dynamics learning and sharing technology for adaptive and predictable cooperative autonomous driving. Research on developing a real-time dynamics learning for cooperative train driving. Joint research with Korea Railroad Research Institute. (*Apr. 2025 - Present*)

Technical Skills

Languages: English (B2), Korean (Native).
Programming: Python, R, SAS, C/C++, Java, C#, JavaScript.
Frameworks: PyTorch, TensorFlow.

Publications

[2025]:

- **[Paper] SungJun Eom**, Gyunghoon Park,"Differential Dynamic Programming for the Optimal Control Problem with an Ellipsoidal Target Set and Its Statistical Inference " in 25th International Conference on Control, Automation and Systems (ICCAS) 2025.

[2022]:

- **[Paper]** Jae-Seok Jang, Bon-Jae Ku, **Sung-Jun Eom**, Ji-Hyeong Han,"Malware detection methodology through on pre-training and transfer learning for AutoEncoder based deobfuscation" in KIPS 2022.